

## II. AMENDMENTS TO THE CLAIMS

*Please amend the application as follows:*

1. (Currently Amended) A diagnosis system for diagnosing a failure in an electronic device, comprising:

a computing device comprising:

a defect table that associates previously studied features with known failures; and

a fault isolation system that ~~compares~~ cross-references an inputted set of suspected faulty device features with the previously studied features listed in the defect table to generate a set of possible failures, and then compares the set of possible failures with a fault signature of an existing failure in order to identify causes of the existing failure, wherein the inputted set of suspected faulty device features is generated from a simulation program that programmatically simulates operation of the electronic device in a virtual environment.

2. (Original) The diagnosis system of claim 1, wherein the previously studied features are selected from the group consisting of: net names, instance names, cell names, physical attributes, logical attributes, presence of a feature, and absence of a feature.

3. (Original) The diagnosis system of claim 1, wherein the previously studied features comprise physical attributes of the device.

4. (Original) The diagnosis system of claim 1, wherein the previously studied features comprise logical attributes of the device.

5. (Previously Presented) The diagnosis system of claim 1, wherein the simulation program utilizes device logic and operational logs to identify faulty device features.
6. (Original) The diagnosis system of claim 5, wherein the inputted set of suspected faulty device features comprises a list of net names.
7. (Original) The diagnosis system of claim 1, further comprising a table update system for maintaining and updating the defect table.
8. (Original) The diagnosis system of claim 1, further comprising a simulation program for simulating the operation of the device.
9. (Currently Amended) A method for diagnosing a failure in an electronic device, comprising:
  - simulating the operation of the device using a simulation program on a computing device;
  - determining a set of features in the device from the simulation that are potentially causing the failure;
  - providing a defect table that associates previously studied features with known failures;
  - and
  - comparing the set of features with the previously studied features listed in the defect table to generate a set of possible failures; and
  - comparing the set of possible failures with a fault signature of the failure in order to identify a cause of the failure.

10. (Original) The method of claim 9, comprising the further step of performing a failure analysis on the identified cause of the failure.
11. (Original) The method of claim 10, wherein the failure analysis comprises a physical analysis.
12. (Original) The method of claim 10, wherein the failure analysis comprises a simulation that analyzes a fault signature.
13. (Original) The method of claim 9, wherein the set of features and previously studied features comprise net names.
14. (Original) The method of claim 9, comprising the further step of updating the defect table with analysis results.
15. (Currently Amended) A program product stored on a recordable medium for diagnosing a failure in an electronic device, comprising:
- program code for storing data that associates previously studied features with known failures; and
  - program code for comparing an inputted set of suspected faulty device features with the previously studied features listed to generate a set of possible failures, and then for comparing the set of possible failures with a fault signature of an existing failure in order to identify causes

of the existing failure, wherein the inputted set of suspected faulty device features is generated from a simulation program that programmatically simulates operation of the electronic device.

16. (Original) The program product of claim 15, further comprising means for updating the storing means.

17. (Original) The program product of claim 15, wherein the previously studied features and the inputted set of potentially faulty device features are selected from the group consisting of: net names, instance names, cell names, physical attributes, logical attributes, presence of a feature, and absence of a feature.

18. (Previously Presented) A method for fault diagnosis of a failing device, comprising:  
determining data for suspected locations and features of a fault using a simulation program;  
entering the data in a table;  
performing a fault diagnosis;  
iterating through the above steps for further failing devices having further faults.

19. (Original) The method of claim 18, wherein the fault diagnosis comprises examining data in the table.

20. (Original) The method of claim 18, comprising the further step of entering date in the table resulting from said fault diagnosis.